ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
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11-DEC-2001

SUBJECT: ON Semiconductor Final Product/Process Change Notification #12109

TITLE: Final Notification - Motorola BMC To Tesla: MC33164/34164, MC33078/79, MC33171, and LM337

EFFECTIVE DATE: 09-Feb-2002

AFFECTED CHANGE CATEGORY: On Semiconductor Fab Site

AFFECTED PRODUCT DIVISION: Analog Products

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or Joe Duffalo <FFBH9W@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office
or Alan Garlington <RPR180@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact Sales Office or Alan Garlington <RPR120@onsemi.com>

DISCLAIMER:
Final Product/Process Change Notification (FPCN) -Final Notification completing the notification process. Distributed at least 60 days from the effective date of the change. ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact your local ON Semiconductor Sales Office.

DESCRIPTION AND PURPOSE:
This is a Final PCN (Product Change Notice) to notify customers of the qualification of certain Analog devices being transferred to the Tesla Wafer Fab in the Czech Republic. An initial PCN (# 11528) was published on 19 July 2001 providing information on all the devices being transferred and the overall scope of the program. The devices listed below have been fully qualified and are now ready to transfer to Tesla from the Motorola BMC wafer fab. The existing design database in use at BMC was transferred to Tesla with no change to the functional circuit design. No change in the device functionality nor electrical distributions have been found but it is recommended that customers evaluate the devices in their applications to insure proper operation. Samples are available upon request. At the expiration of this PCN(60 Days), fabrication of these devices will occur at either the Tesla Wafer Fab or the BMC Fab depending on capacity and demand requirements.

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RELIABILITY DATA SUMMARY:

Technology	Flow	Device Types	Fab	Test	Conditions	Rej	SS
Std Linear	EPI 85/92	MC33033P	Tesla	HTOL	150C; Biased, 1008 Hrs	0	240
Std Linear	EPI 85/92	MC33033P	Tesla	TC	-65C to +150C, 1000 Cyc	0	240
Std Linear	EPI 85/92	MC33033P	Tesla	HTS	150C; No Bias, 1008 Hrs	0	80
Std Linear	EPI 85/92	MC33033P	Tesla	AC	121C; 100% RH, 144 Hrs	0	240
Std Linear	EPI 85/92	MC33064D	Tesla	HTOL	150C; Biased, 1008 Hrs	0	240
Std Linear	EPI 85/92	MC33064D	Tesla	TC	-65C to +150C, 1000 Cyc	0	240
Std Linear	EPI 85/92	MC33064D	Tesla	HTS	150C; No Bias, 1008 Hrs	0	80
Std Linear	EPI 85/92	MC33064D	Tesla	AC	121C; 100% RH, 144 Hrs	0	240
Std Linear	Epi 85 DL	MC44603A	Tesla	HTOL	125C; Biased, 1000 Hrs	0	231
Std Linear	Epi 85 DL	MC44603A	Tesla	TC	-65C to +150C, 500 Cyc	0	231
Std Linear	Epi 85 DL	MC44603A	Tesla	AC	121C;100% RH;15 psi, 96 Hrs	0	231
Std Linear	Epi 85 DL	MC44603A	Tesla	HAST	130C; 85%RH biased, 96 Hrs	0	231
Std Linear	Epi 78/79	MC1413D	Tesla	HTOL	150C; Biased, 1008 Hrs	0	154
Std Linear	Epi 78/79	MC1413	Tesla	TC	-65C to +150C, 500 Cyc	0	154
Std Linear	Epi 78/79	MC1413	Tesla	AC	121C; 100% RH, 96 Hrs	0	154
Std Linear	Epi 78/79	MC1413	Tesla	HAST	130C; 85%RH; Biased, 96 Hrs	0	154
Std Linear	Epi 78/79	MC1413	Tesla	THB	85C; 85%RH; Biased, 1008 Hrs	0	154
Std Linear	Epi 78/79	MC1413	Tesla	HTS	150C; No Bias, 1008 Hrs	0	154
Std Linear	Epi 78/79	MC33079P	Tesla	HTOL	150C; Biased, 1008 Hrs	0	240
Std Linear	Epi 78/79	MC33079P	Tesla	TC	-65C to +150C, 1000 Cyc	0	240
Std Linear	Epi 78/79	MC33079P	Tesla	HTS	150C; No Bias, 1008 Hrs	0	240
Std Linear	Epi 78/79	MC33079P	Tesla	AC	121C; 100% RH, 96 Hrs	0	240
Std Linear	Epi 78/79	MC33079P	Tesla	HAST	130C; 85% RH; Biased, 96 Hrs	0	240
Std Linear	Epi 78/79	MC33079P	Tesla	THB	85C; 85% RH; Biased, 1008 Hrs	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	HTOL	150C; Biased, 1008 Hrs	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	TC	-65C to +150C, 1000 Cyc	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	HTS	150C; No Bias, 1008 Hrs	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	AC	121C; 100% RH, 96 Hrs	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	HAST	130C; 85% RH; Biased, 96 Hrs	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	THB	85C; 85% RH; Biased, 1008 Hrs	0	240

ELECTRICAL CHARACTERISTIC SUMMARY:

MC33164-3 - 1 lot Characterization data, Major parameters

Parameter	Unit	Mean	S.D.	Min.	Max.	Specification Min.	Specification Max.
Quiescent Input Current (Vin = 6 v)	ua	25.8	.34	24.9	26.4		40
Comparator High State Output Voltage	V	2.69	.007	2.67	2.70	2.55	2.80
Comparator Low State Output Voltage	V	2.64	.007	2.62	2.65	2.55	2.80
Comparator Hysteresis	mv	48.8	.885	47.1	50.7	30.	
Output Sink Saturation (Vin = 1.0v, Isink = .25ma)	mv	95.7	.58	94.8	97.2		300.
Output Sink Current	ma	13.8	.148	13.5	14.1		30.

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LM337T - 1 lot Characterization data, Major parameters

Parameter	Unit	Mean	S.D.	Min.	Max.	Specification Min.	Specification Max.
Reference Voltage (IL = 10 ma)	V	-1.249	.008	-1.26	-1.232	-1.20	-1.30
Reference Voltage (IL = 1.5A)	V	-1.248	.008	-1.26	-1.232	-1.20	-1.30
Adj Pin Current	ua	61.0	.73	59.3	63.1		100.
Load Regulation	mv	.808	.228	.200	1.20		50.

MC33078 -- 1 lot Characterization data, 1 Channel. Major parameters

Parameter	Unit	Mean	S.D.	Min.	Max.	Specification Min.	Specification Max.
ID+	mA	4.183	0.018	4.155	4.224	0.4	5
ID-	mA	-4.221	0.019	-4.262	-4.190	-5	-0.4
VIO	mV	0.131	0.141	-0.163	0.525	-2	2
SR+	V/uS	7.552	0.039	7.469	7.628	5	25
SR-	V/uS	7.898	0.037	7.800	7.961	5	25
GBW Product	MHz	18.6	.11	18.4	18.9	10.0	

MC33079 -- 1 lot Characterization data, 1 Channel. Major parameters

Parameter	Unit	Mean	S.D.	Min.	Max.	Specification Min.	Specification Max.
ID+	mA	8.788	0.044	8.693	8.889	0.4	10
ID-	mA	-8.775	0.046	-8.879	-8.686	-10	-0.4
VIO	mV	-0.043	0.125	-0.259	0.248	-2.5	2.5
SR+	V/uS	7.526	0.182	6.533	7.658	5	25
SR-	V/uS	7.986	0.058	7.865	8.122	5	25
GBW Product	kHz	18.4	.227	17.2	18.6	10.	

MC33171 -- 1 lot Characterization data, Major parameters

Parameter	Unit	Mean	S.D.	Min.	Max.	Specification Min.	Specification Max.
ID+	mA	0.222	0.003	0.215	0.226		0.25
ID-	mA	0.260	0.002	-0.229	-0.219	-0.25	-0.01
VIO	mV	0.471	0.603	-0.635	1.776	-4.5	4.5
SR+	V/uS	2.770	0.044	2.676	2.844	1.6	7
SR-	V/uS	6.488	0.099	6.206	6.716	1.6	10
GBW	kHz	1952.38	12.78	1929.62	1681.19	1400	7000

CHANGED PART IDENTIFICATION:
Normal assembly lot traceability codes can be used to identify the wafer fab source.

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AFFECTED DEVICE LIST (WITHOUT SPECIALS):

PART

LM337AT
LM337BD2T
LM337BD2TR4
LM337BT
LM337D2T
LM337D2TR4
LM337T
MC33078D
MC33078DR2
MC33078P
MC33079D
MC33079DR2
MC33079P
MC33164D-003
MC33164D-005
MC33164D-3R2
MC33164D-5R2
MC33164DM-3R2
MC33164DM-5R2
MC33164P-003
MC33164P-005
MC33164P-3RP
MC33164P-4.6RA
MC33164P-5RA
MC33164P-5RP
MC33171D
MC33171DR2
MC33171P
MC34164D-003
MC34164D-005
MC34164D-3R2
MC34164D-5R2
MC34164DM-3R2
MC34164DM-5R2
MC34164P-003
MC34164P-005
MC34164P-3RP
MC34164P-5RA
MC34164P-5RP
MC34164SN-5T1
TYA33164D-5R2
TYA33164P-5RP